

## CLAIMS

- 1 1. A method for a network device to claim ownership of a disk in a network storage  
2 system comprising the steps of:  
3 setting a first ownership attribute on the disk to a state of ownership by network  
4 device; and  
5 setting a second ownership attribute on the disk to a state of ownership by net-  
6 work device.
- 1 2. The method of claim 1, wherein one of the first ownership attribute and the sec-  
2 ond ownership attribute further comprises a small computer system interface level 3 per-  
3 sistent reservation tag.
- 1 3. The method of claim 1, wherein one of the first ownership attribute and the sec-  
2 ond ownership attribute further comprises ownership information written on a predeter-  
3 mined area of the disk.
- 1 4. The method of claim 3, wherein the ownership information further comprises a  
2 serial number of the network device.
- 1 5. The method of claim 1, wherein the network device comprises a file server.
- 1 6. A method of claiming ownership of a disk by a network device in a network stor-  
2 age system comprising the steps of:  
3 writing ownership information to a predetermined area of the disk; and  
4 setting a small computer system interface level 3 persistent reservation tag to a  
5 state of network device ownership.
- 1 7. The method of claim 6 wherein the ownership information further comprises a  
2 serial number of a network device.

- 1 8. The method of claim 6, wherein the network device comprises a file server.
- 1 9. A network storage system comprising:  
2 a plurality of network devices;  
3 one or more switches, each network device connected to at least one of the one or  
4 more switch; and  
5 a plurality of disks having a first ownership attribute and a second ownership at-  
6 tribute, each disk connected to at least one of the plurality of switches.
- 1 10. The network storage system of claim 9, wherein the first ownership attribute fur-  
2 ther comprises ownership information written on a predetermined area of the disk.
- 1 11. The network storage system of claim 9, wherein the second ownership attribute  
2 further comprises a small computer system interface level 3 persistent reservation tag.
- 1 12. The networked storage system of claim 11, wherein each disk that is owned by  
2 the network device has the small computer system interface level 3 persistent reservation  
3 set such that only the network device may write to the disk.
- 1 13. The network storage system of claim 10, wherein the ownership information fur-  
2 ther comprises of a serial number of the network device that owns that particular disk.
- 1 14. The network storage system of claim 10, wherein each of the plurality of file  
2 servers can read data from each of the plurality of disks.
- 1 15. The network storage system of claim 10, wherein only a network device that owns  
2 one of the plurality of disks can write data to the one disk.
- 1 16. The network storage system of claim 9, wherein the network devices comprise  
2 file servers.  
3

1 17. A network storage system comprising:  
2 one or more switches;  
3 a plurality of disks; and  
4 a plurality of network devices, each of the network devices including means for  
5 claiming ownership of one of the plurality of disks in the network storage system.

1 18. The network storage system of claim 17, wherein the means for claiming owner-  
2 ship further comprises:  
3 means for writing ownership information to a predetermined area of a disk; and  
4 means for setting a small computer system interface level 3 persistent reservation  
5 on a disk.

1 19. The network storage system of claim 17, wherein the network devices comprise  
2 file servers.

1 20. A network storage system comprising:  
2 one or more switches interconnected to form a switching fabric;  
3 a plurality of disks, each of the disks connected to at least one of the switches; and  
4 one or more network devices, interconnected with the switching fabric, each of  
5 the network devices being adapted to own a predetermined set of disks of the plurality of  
6 disks.

1 21. The network storage system of claim 20, wherein the plurality of disks further  
2 comprises a first ownership attribute and a second ownership attribute.

1 22. The network storage system of claim 21, wherein the first ownership attribute is  
2 ownership information written to a predetermined area of each of the disks.

1 23. The network storage system of claim 22, wherein the ownership information fur-  
2 ther comprises a serial number of one of the one or more network devices.

1 24. The network storage system of claim 21, wherein the second ownership informa-  
2 tion is a small computer system interface level 3 persistent reservation.

1 25. The network storage system of claim 20, wherein each of the network devices  
2 further comprises a disk ownership table, the disk ownership table containing ownership  
3 data for each of the disks.

1 26. The network storage system of claim 25, wherein the ownership table further  
2 comprises a world wide name for each of the disks, the world wide name being used for  
3 identification of each of the disks.

1 27. A computer-readable medium, including program instructions executing on net-  
2 work device, for performing the steps of:  
3 writing ownership information to a predetermined area of a disk; and  
4 setting a small computer system interface level 3 persistent reservation tag to a  
5 state of network device ownership.